

REMARKS

Claims 1-9 and 30-54 are in this application and are presented for consideration. New Claims 50-54 have been added to further disclose the invention. New Claims 50-54 are based on newly amended Claim 1.

Claims 1, 30, 36, 39 and 41-43 have been objected to because of minor informalities. Applicant has amended Claims 1, 30, 36, 39 and 41-43 paying close attention to the Examiner's comments. The issues raised have been addressed.

Claim 30 has been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant has amended Claim 30 paying close attention to the Examiner's remarks. Applicant wishes to thank the Examiner for the careful review of the claims.

Claims 1-4, 7, 8, 30-43 and 45-48 have been rejected under 35 U.S.C. 102(b) as being anticipated by Schutt et al. (US 5,611,635).

Schutt et al. discloses a ball joint comprising a housing 1 provided with an opening 1a and a gudgeon 2 arranged in a ball socket 3 made of plastic. In the assembled condition, an annular shoulder 3c of the ball socket 3 adjoins the underside of the housing 1. The Schutt et al. reference fails to teach and fails to disclose that at least a part of the housing part is covered by molded material of the ball socket on its inner peripheral surface and on its outer peripheral surface. According to Schutt et al. only the inner peripheral surface and the lower front edge surface of the housing 1 are covered by the material of the ball socket 3.

Applicant has emphasized the novel and important characteristics of Applicant's invention Claim 1 pointing out that the housing part has an outer peripheral surface at the outside of the housing part which extends from the top end surface (edge surface) to the pivot pin opening edge surface or bottom surface. The housing part has an inner peripheral surface at an inside extending from the top surface to the bottom surface. These surfaces not only have molded material on them but also the molded material define functional surfaces on an inside and an outside of the housing part. The housing part is arranged in a radial direction between the outer molded material functional surface and the inner molded material functional surface. There is no suggestion in the Schutt et al. reference to provide molded material on the outer peripheral surface of the housing part, namely the surface which extends from the top end edge surface, namely adjacent to the top opening to the pivot pin edge surface, namely part of the housing which eventually is to the outside of the entire ball and socket joint construction.

Applicant's invention provides significant advantages with regard to manufacturing and provides the functional surface on the outside of the housing part, namely a groove for receiving a bellows seal element. Schutt et al. on the other hand discloses a bearing shell for the inside of the housing part which includes a flange extending downwardly with a part braced against the bottom edge of the housing part wherein the flange traps the bellows seal between itself and the bottom edge of the housing part. The difference is significant in practice and Schutt et al. does not suggest a molded part outer seat surface, on the outer surface of the housing part, as defined in the claim, and does not suggest how this can be provided and does not suggest any advantage to doing such. Schutt et al. relies on a trapping of the structure and does not suggest

a bellows seat surface or other functional surface on the outside defined radially outwardly of the outer periphery of the housing. As such, the prior art suggests a different approach and does not suggest the features or advantages of the invention. Accordingly, Applicant respectfully requests that the Examiner favorably consider amended Claim 1. Applicant also respectfully requests that the Examiner favorably consider Claims 2-9, 37-38 and new Claims 50-54 as they are based on newly amended Claim 1.

The Schutt et al. reference also fails to teach and fails to suggest a ball joint with molded material defining a groove with the housing edge or end surface engaged in a region of the molded material part having the groove. Specifically, with the invention, the groove portion or surface defined by the molded material (and defined by the support of the housing part) is such that the end or pivot pin opening edge surface of the housing part engages or is arranged in the groove region of this material. This can be appreciated for example from Fig. 13 which shows an outer groove surface or seat for a bellows seal which is in a region of the molded part with the edge surface or end surface of the housing part extending into it. Although the housing part or edge need not be fully covered with the material as in the embodiment of Fig. 13 the groove structure with housing part edge inserted into the molded part region provides particular advantages as to support and robust functionality during use. This differs significantly from the Schutt et al. reference which relies on a simple trapping of the bellows end in a seat which is basically opposite to the bottom edge of the housing 1 (to form the trapping action). Although the wrapping or extension of the bearing shell of Schutt et al. over the bottom surface does provide some leverage support, Schutt et al. neither teaches nor suggests the combination of

features of Claim 30 and instead directs the person of ordinary skill in the art toward a different construction and different concepts, namely the trapping concept leverage from the bottom edge. Schutt et al. fails to teach that the housing part is arranged in a radial direction between the groove and the functional surface. Applicant's structure uses the bottom edge surface or end surface of the housing extending into the region of the molded part which forms the groove, providing ease of manufacture as well as allowing a seat to be provided with good mechanical attributes. With the invention, the bellows seal is seated pressed radially inwardly, namely the material is built up off of the housing edge allowing a seat which has the strength of the housing part, the surface provided by the molded material with this being of a molded material part with functional portions on the outside and inside of the housing part. As such, the prior art suggests a different approach and does not suggest the features or advantages of the invention. Accordingly, Applicant respectfully requests favorably consideration of newly amended Claim 30. Applicant also respectfully requests favorably consideration of Claims 31-36 and 39-40 as they are based on newly amended Claim 30.

Claim 41 highlights that the molded material forms at least part of the bearing shell on the inside of the housing part and a groove on the outside of a housing part with the groove being defined by a bent or curved portion of the housing part cooperating with the molded material on the housing part outer surface. The material itself may define the basic contour of the curve. The curved or bent housing part provides functional and structural stability in providing the curve along the axial extent of the groove. This structure is clearly neither taught nor suggested by Schutt et al. Furthermore, Schutt et al. fails to teach that the housing part is

arranged in a radial direction opposite the groove with the molded material covering the opposite end of the housing part. As such, the prior art suggests a different approach and does not suggest the features or advantages of the invention. Accordingly, Applicant respectfully requests that the Examiner favorably consider newly amended Claim 41. Applicant also respectfully requests that the Examiner favorably consider Claims 42-49 as they are based on newly amended Claim 41.

Further and favorable action on the merits is requested.

Respectfully submitted
for Applicant,



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Attached: Petition for One Month Extension of Time

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SHOULD ANY OTHER FEE BE REQUIRED, THE PATENT AND TRADEMARK OFFICE IS HEREBY REQUESTED TO CHARGE SUCH FEE TO OUR DEPOSIT ACCOUNT 13-0410.